LITTLE BLUE BOOK NO. 1575
Edited by E. Haldeman-Julius

The History of Venereal Diseases

Leo Markun

LITTLE BLUE BOOK NO. 1575
Edited by E. Haldeman-Julius

The History of Venereal Diseases

Leo Markun

HALDEMAN-JULIUS PUBLICATIONS
GIRARD, KANSAS

Copyright,
Haldeman-Julius Company

PRINTED IN THE UNITED STATES OF AMERICA

THE HISTORY OF VENEREAL DISEASES

INTRODUCTION

By a venereal disease we mean one that is transmitted chiefly in sexual intercourse. "Social disease" is a euphemism or prudish substitute sometimes heard. The word *venereal* is derived from the name, Venus, which the Romans gave to their goddess of love, through the adjective *Venereus*, belonging to Venus. We sometimes speak of sexual gratification, especially coition, as venery. The same word (or a word of the same spelling and pronunciation, to be more exact) is used to mean hunting, the sport of the chase; this is derived from a Latin verb having no connection with the Venus idea.

The venereal diseases, according to the present classification, are three. The one we are likely to think of first, syphilis, is less common in the twentieth century than gonorrhea. The latter disease takes its name from two Greek words, *gonos*, seed or semen, and *rheein*, to flow. Chancroid, also known as soft chancre or soft sore (to distinguish its chief symptom from the hard chancre by which syphilis makes its presence known) is the least dangerous of the three diseases. It is also reported to be the least common, but possibly its rarity is exaggerated because it does not always suggest an imperative need of medical treatment. *Chancre* is a French form of *canker* and the Latin *cancer*, from which we have derived the name of one of our most deadly maladies.

At least some of the symptoms of each of the venereal diseases appear in the sexual organs. Not all the pathology of these regions is referred to the venereal diseases, though. For example, mumps, which is a common contagious illness, may bring about a disorder in the testicles. There are even some minor diseases which are supposed to be found only in the generative organs, but which are not considered contagious, and therefore do not belong in our group. Various respiratory diseases must often be transmitted by means of kisses, but of course they are not primarily venereal.

The venereal diseases are not spread exclusively through sexual relations. Towels, toilet seats, drinking cups, and the unwashed fingers of physicians and dentists are among the things that have broadcast their infection. Syphilis is often hereditary, but, according to Dr. Pusey (in his brief treatise on this malady, Little Blue Book No. 903), it is so fatal when untreated that most cases disappear in infancy. This is the case with the inherited disease; otherwise acquired, it is much more dangerous if not properly cared for, but it may pass away of itself. "Syphilis," says Pusey, "is contracted in 95 per cent or more of cases by sexual intercourse or kissing." Gonorrhea and chancroid, too, are in most cases spread through erotic acts.

Gonorrhea and chancroid may be considered local diseases; that is, their chief manifestations are usually confined to the sexual organs; always so confined, I believe, in the case of chancroid, although carelessness in those suf-

fering from gonorrhea may cause serious eye trouble. Syphilis is a disease of the whole body. Further details about the nature and course of these diseases may be found in the Little Blue Books dealing with them and with sex in general.

ANCIENT AND MEDIEVAL TIMES

The classical literature of the Greeks and Romans deals with a great many aspects of sex, but it contains no description of a venereal disease which, like syphilis, spreads through the whole system. Indeed, they do not say a great deal about maladies which we can easily identify as equivalent to our gonorrhea and chancroid. That these have existed for thousands of years seems certain, however. So far as I can learn, no ancient writer deals with them as clearly acquired in sexual intercourse with prostitutes or other persons suffering from them. Before the nineteenth century, the general idea of contagion in disease was necessarily somewhat vague, although it was recognized much earlier that contact with persons suffering from certain maladies or with objects they had touched might cause infection.

According to the fifteenth chapter of Leviticus, the Lord bade Moses and Aaron say to the children of Isreal: "When any man hath a running issue out of his flesh, because of his issue he is unclean. And this shall be his uncleanness in his issue: whether his flesh run with his issue, or his flesh be stopped from his issue, it is his uncleanness. Every bed, whereon

he lieth that hath the issue, is unclean: and everything, whereon he sitteth, shall be unclean. And whosoever toucheth his bed shall wash his clothes, and bathe himself in water, and be unclean until the evening."

Similarly unclean and cleansable is he who "toucheth the flesh of him that hath the issue" and he who is spat upon by one having an issue. "And if any man's seed of copulation go out from him, then he shall wash all his flesh in water, and be unclean until the even. And every garment, and every skin, whereon is the seed of copulation, shall be washed with water and be unclean until the even. The woman also with whom man shall lie with seed of copulation, they shall both bathe themselves with water, and be unclean until the even."

The children of Israel were next told that if "a woman have an issue, and her issue in her flesh be blood, she shall be put apart seven days," during which time anything she touches becomes unclean, and any man who has sexual relations with her must also be put apart for seven days. The animal sacrifices required in connection with menstruation or other "issue" do not concern us here. The sanitary measures mentioned are rather crude, but not altogether useless. Of course, the man who has had intercourse with a menstruating woman (providing she is not harboring dangerous germs) is not "unclean" in any hygienic sense during the following week, and there is no sound reason for isolating the woman herself.

Presumably, gonorrhea would be rarer in a people observing the rules about bathing after

intercourse than in one without any such law. Circumcision is said by modern specialists to afford a certain amount of protection against syphilis, but none at all against gonorrhea. At the time when the Hebrews and many other peoples of Asia and Africa considered cutting off the foreskin purely as a religious rite, it is highly doubtful if syphilis existed among them.

A serious case of syphilis usually brings about changes in the bone structure of the sufferer, and these, there is every reason to believe, should be recognized by a skilled observer in bones that are thousands of years old. Many ancient skeletons have been examined, but in none found in Old World soil dating from before Columbus's discovery of the West Indies have clear evidences of syphilis been found. It was largely for this reason that the great German pathologist Rudolf Virchow came to the conclusion that Europe, Asia, and Africa had no acquaintance with syphilis before 1492. Dr. Iwan Bloch of Berlin, the great historian of sexual matters both from medical and non-medical points of view, presented his evidence to the same effect in two large volumes, during the early years of the twentieth century.

There are still, it is true, some writers on medicine who declare that syphilis existed in ancient times, and some think it must always have been a scourge of mankind. Hereditary syphilis seems to fulfil admirably the function of showing how the sins of the fathers bring calamity upon their children. Besides, the notion that extramarital sexual intercourse makes God very angry goes well with the assumption

that venereal diseases must be considered in the nature of punishment for sin.

Hereditary syphilis, if it is not very common, is nevertheless striking enough when it does occur. Why have we no definite reference to it in the literature of ancient times? The possibility that the disease existed in olden days cannot be entirely excluded, but it seems exceedingly slender.

The Hebrews were inclined to think of all maladies as penalties for offenses against gods or God, but they had lay physicians at a comparatively early time. Other primitive peoples have usually permitted the priests to monopolize the work of healing, conceiving the task of the holy men in medicine to be that of appeasing cruel divinities and driving out demons.

Water is often held to be morally and spiritually as well as physiologically and mechanically a cleansing agent. We must remember this if we would properly appraise the quotations from Leviticus made above. The Greeks in the days of Homer and Hesiod considered it a religious duty to wash their hands in the morning. The Jewish Cabalists have also attached much importance to morning ablutions, and their holy book, the Zohar (claimed to be ancient, but probably late medieval for the most part) says that the hands should be washed on awakening before the fingers touch the eyes. Shall we interpret this as based upon experience with gonorrhea? We can only guess.

In fact, we must constantly be constructing our story out of very slender materials when

we deal with venereal diseases in the ancient world. The flux referred to in Leviticus must have been largely gonorrheal. Diseases of the sexual organs to which ancient writers refer seem to have been in some instances chancroid and gonorrhea.

Juvenal and Martial speak rather vaguely of disgusting diseases, but they do not attribute them to sexual intercourse. Celsus, who wrote on scientific subjects in the early days of the Roman Empire, speaks apologetically about the need of instructing people as to the nature of secret maladies, then proceeds to describe some diseases of the sexual organs. Other Roman writers mention diseases of various names, which might be imagined forms of syphilis if all the definite evidence were not against such a supposition. The physicians of Rome seem to have considered sexual diseases shameful, and to have refused to treat them. Later the masses of the people were provided with public physicians, who must have treated gonorrhea and chancroid.

Sexual medicine among the Greeks and Romans was left largely to women, some of them primarily midwives, others primarily witches or workers in magic. They prepared aphrodisiacs, love philtres, and drugs for producing abortion. To them a prostitute was most likely to turn when confronted with unpleasant symptoms centering on the genital parts. Men, too, in such a situation, especially if they were not wealthy enough to have private physicians of their own, took their troubles to midwives or to druggists.

Iwan Bloch, who had carefully examined a great mass of literary material before writing the first volume of his work on prostitution, says in it that "it was only the morbid secretions which caused disgust" with ancient prostitutes who must have been venereally diseased, whereas people were "far from any thought of their possible contagiousness." In the writings of the Greek physicians there are references to discharges of unpleasant odor and disagreeable appearance which caused some prostitutes to be avoided, but no hint that these things warned of serious danger to health.

In Egypt and in many parts of the Orient, it was a religious duty, as with the Jews, to bathe immediately after coition. The Greeks and Romans provided brothels with full supplies of water, and prostitutes spent a fairly large part of their time washing themselves. Their patrons as well purified themselves with water after intercourse. We know that the women were primarily concerned with removing all traces of a disagreeable odor. They used a sort of vaginal syringe as well as a sponge. Like perfumes and unguents, water was first of all something with which to make themselves more attractive.

The Greeks and the Romans frequently covered their bodies with oil and light greasy substances, and this was a regular practice before the performance of love's rites. Some medical writers now recommend the covering of the sexual parts with a thin layer of petroleum jelly to reduce the possibility of contagion in coition. Iwan Bloch suggests, in the ab-

sence of better safeguards, washing before and after intercourse, urination afterward. The greasing and the washing were known to the ancients, although we have no evidence that they thought of these things as preventing the communication of disease.

Perhaps water and oil, universally used, really kept chancroid and gonorrhea from becoming dangerous plagues in ancient Greece and Rome. Gonorrhea, which may cause impotence and blindness, is by no means considered trifling now. All the authorities agree that at least two of the three venereal diseases existed among the ancients, and it is not readily apparent why they were not more concerned with them. We must suppose not only that syphilis was unknown but that the other two were not readily associated with prostitutes.

It was in medieval Christian Europe, where the oiling of the body was unusual and bathing often was condemned as sinful, that the contagious nature of certain sexual diseases came to be suspected. It may be guessed, therefore, that the hygienic methods adopted by the Greeks and Romans were more useful to them than they knew. Or it might be said that the patronizing of brothels was so universal with them that the connection of a prostitute visited a fortnight before with the appearance of disease symptoms could not readily arise. This does not seem a satisfactory explanation, for not all the classical Greeks and Romans regularly visited prostitutes. Besides, the association between sexual intercourse and sores on an organ concerned in it is an easy one to

make, even for men at a much lower cultural level than that which the physicians of Athens reached.

Whatever the reason for it may be, a young Greek or Roman walking to the brothel in ancient days was not disturbed by any passing thought that his pleasure might prove more costly than the immediate reckoning. This one fact accounts for a large part of the difference between their way of looking at prostitution and ours. If right now syphilis could be entirely abolished and gonorrhea turned into a minor non-contagious disease, it is not probable that we should attach nearly so much importance to the Judaeo-Christian system of sexual morality which has come down to us.

Between us and their simple outlook lies a great fear, which at times influences the most light-hearted of Don Juans, and from which only the very dull-witted are entirely free. The fear of venereal disease has had important results not only in the public attitude toward prostitution but in the outlook upon all extramarital sexual intercourse.

In classical antiquity, it was held that an adulterous woman might wrong her husband by bearing a child not actually his. This sort of offense a husband could not commit against his wife. Even though the status of women as compared with that of men was comparatively low, we might easily imagine that a husband's intercourse with prostitutes would have been more harshly judged if it had been known to involve the risk of infecting his wife and unborn children.

Gonorrhea must have existed, nevertheless, in the ancient world, and there is no good reason for supposing that it was then a milder disease than it is today. Merely as a guess, we may consider the possibility that those peoples which legislated sharply against fornication and adultery were especially troubled by gonorrhea and chancroid. In any case, this could not have been the only reason for the wide differences between the dominant morality of, for instance, the Hebrews and that of the Greeks.

The device most used for prophylaxis against the venereal diseases was probably unknown to the ancients. We first hear of its existence in the sixteenth and seventeenth centuries, and it did not come into general notice until almost our own time.

A Byzantine church historian tells the story of a Christian virgin who was, during the fourth century, put into a brothel by way of punishing her for her religion and torturing her out of it. When a man came into her room, she frightened him away by telling him that she had a sore on her privy parts. The point is, of course, that she retained her maidenhood and was not even shamed by having to show the organs in question to a man. If we accept the story as historical, we may infer that the contagiousness of certain sexual diseases was understood, or else that disgust kept the visitor from further investigation. But none of these maiden-in-brothel martyrdoms seem to be really historical, and we may dismiss the story as fabulous.

As we enter the Christian Middle Ages, we begin to find hints that diseases are spread in sexual intercourse. The great disease of these times, with which literature and art were much concerned, was leprosy; and for lepers, in accordance with Old-Testament principles, isolation was prescribed. With such a striking example before the public eye and with the official opinion prevailing that God punishes sins on earth as well as in Hell, it was not difficult for men to believe that sexual diseases resulted from what the Encyclopedia Brittanica still calls "impure"—that is, illicit, extramarital—intercourse.

All through the latter centuries of the Middle Ages, we find laws and local ordinances forbidding the keepers of brothels to permit women to remain in their houses when ill or with child. The fear of leprosy and of other maladies which are more surely contagious was responsible for these precautions. Henry II of England ordered in 1161 that the stewholders (keepers of baths and brothels) should not allow "any woman that has the perilous infirmity of burning" to remain accessible to the patrons. The disease called burning seems to have been gonorrhea. The sexual regulations in Leviticus were to some extent adopted, and it was usual to forbid intercourse with a menstruating prostitute.

Fear of venereal disease was one of the causes leading to several edicts against prostitution. All of these proved ineffective, and the brothel as an institution flourished during the Middle Ages. The fact that, especially in

the Mohammedan countries, the bath and the brothel were one must to some extent have checked the transference of gonorrhea. Into Christian Europe this combination came mostly after the Crusades, although it may have survived from Roman days in England. The examination of prostitutes for possible disease was chiefly left to the men and women who managed brothels, although physicians were called to some doubtful cases.

THE NEW DISEASE

Columbus, as we all know, first discovered the islands of the West Indies in 1492. There is documentary evidence, which at least some historians of medicine consider authentic, that syphilis was brought to Spain and Portugal by members of Columbus's crew, some of whom were examined by a Lisbon physician. Even if this evidence is not accepted by all investigators, it seems highly probable that some of the sailors were generously entertained by Indian young ladies, and that syphilis was one of the gifts they received.

Like potatoes and maize or Indian corn, the micro-organism which causes syphilis was unknown to the Old World until introduced from America. The fact has been denied, but it seems almost as certain as the novelty of tobacco and the foods already named after Columbus's return.

One early syphilographer (writer on syphilis), Brassavola, does say that the new and terrible disease appeared in 1485. Since, how-

ever, all the other writers of the sixteenth century, and they were many, fix the date at 1493 or 1494, we must assume that Brassavola was somehow mistaken.

In 1494 King Charles VIII of France set out to conquer Italy. He succeeded in taking Naples the next year, and was crowned, among other things, Emperor of the East and King of Jerusalem, but soon he abandoned his conquests, leaving none of them to his successors. One at least relatively permanent result did spring from Charles VIII's expedition: syphilis was introduced into Italy.

According to some German physicians of the sixteenth century, an unfavorable planetary conjunction in 1493 brought the scourge of syphilis to men, planting it first at Naples. It seems to have been observed at Barcelona before it came to Italy. At any rate, it was believed by the Italians to have been introduced by Charles VIII's soldiers, and they named it the French pox.

Nicolaus Leonicenus, the first syphilographer, published *De Mor'o Gallico* ("Of the French Disease") in 1497. Italy, he says, was attacked simultaneously by the French army and the new malady. The germs the soldiers brought with them were to prove much more injurious than all their weapons and ammunition. A second book on syphilis appeared in 1498, a third in 1503, and many more followed.

Leonicenus distinctly says that the French disease was something new, not one of the maladies described by Galen and other accepted authorities. Physicians in the sixteenth cen-

tury were little accustomed to decide upon new remedies. What the Greeks and the Arabs had used as cures they could not hope to better. Since syphilis presented itself to them as a skin disease, they decided to use mercurial ointment in the attempt to treat it.

No single physician is credited with introducing the mercury treatment for syphilitics. Some authorities still consider it the most important of all, and certainly there was nothing better before the twentieth century. Nevertheless, complaints soon appeared that the results of mercury treatment, such as tremors, paralysis, and the falling out of teeth, were worse than the disease. When properly used, modern syphilis specialists say, mercury not only attacks the disease but builds up the body.

Ulrich von Hutten, the German knight who wrote brilliantly against monkish obscurantism, issued in 1519 a book telling of his own cure with the bark of guaicum ("holy wood" or lignum-vitae). This wood was imported from Hispaniola, where the natives made decoctions of it to treat syphilis. Erasmus is said to have had his life saved by the use of this remedy.

Girolamo Fracastoro, an Italian physician, wrote in Latin a poem called *Syphilis*, which appeared in 1530 with a dedication to Cardinal Pietro Bembo, no mean Latinist himself. In an age when a pope, a French king, and many eminent scholars suffered from a new disease, it seemed a proper subject for a serious and didactic poem. Fracastoro's *Syphilis* became very popular all over Europe, and it was praised

by eminent critics. The elder Scaliger called it "a divine poem."

The title is the hero's name, also given as Syphilus. He is an impious shepherd punished with the French disease by Apollo or the sun. Cured with mercury, he is told to show his gratitude to Diana. Such is the pagan nature of the mythology in this book dedicated to a cardinal. Bembo also introduced the classical gods into his writings.

The French pox (or Neapolitan disease, as it was called in France) was a dreadful epidemic in the last few years of the fifteenth century and throughout the sixteenth. Fracastoro describes the symptoms of the disease thus: "The patients were in low spirits and broken down, with pale faces. Most of them had sores upon the sexual organs. These sores were obstinate; cured in one place, they reappeared in another, and the work was never done. Pustules with a hard surface appeared on the skin, most often on the head first of all. When they first appeared they were small, but they gradually increased to the size of an acorn, which in shape they resembled. Some were dry, others moist; some were livid, others white and pale, still others hard and reddish. They burst after a few days, discharging an unbelievable amount of vile malodorous fluid."

Ulcers, he continues, consumed flesh and bone. "Some patients lost their lips, others the eyes others the whole organs of generation. Many were troubled with moist tumors on the limbs, which grew as large as eggs or small loaves. . . . And, as if this were not enough,

the patients suffered terrible pains, especially at night," although some escaped either the pustules or the pains.

Here was a disease which physicians considered new and which acted quite as if Europeans had yet acquired no immunity against it. Matters are different now: we all have, among our numerous ancestors, some who have suffered from syphilis and transmitted an increased resistance against it to their children. Even if the brothel remained now what it was in medieval times and if no new forms of treatment had been introduced, syphilis would yet be a much milder and less fearsome disease than it was in the sixteenth century.

Krafft-Ebing's famous remark connecting civilization with syphilization is therefore not altogether justified. The culture of the late Renaissance, when venereal diseases were feared, did not conspicuously surpass that of the Greco-Roman world, in which no fear of contagion through sexual intercourse seems to have existed, and at least the mechanical aspects of civilization have vastly improved in a time when syphilis has been growing steadily less dangerous.

First, then, the new disease spread through Europe and the other continents of the Old World, finding everywhere men and women who had inherited no protection against its ravages. Measles has similarly proved a horrible plague to savages previously unexposed to it, and tuberculosis has exterminated whole tribes and regions. Next came the time when syphilis began to recede, affecting fewer people

and usually acting more mildly upon them. No precise date can be given for the high mark of syphilis, the time when it was most destructive, but the years between 1550 and 1600 may be suggested for Europe. The disease at its worst did not interfere with literary and other cultural development, any more than cancer and diabetes are interfering now with the expansion of scientific research and the growth in other elements of our civilization.

The extension of syphilis may be traced from some of the names which have been applied to it. In England and along the coast of North Africa it was called the Spanish disease. The Portuguese implied the same origin when they named it the Castilian malady. It apparently came into Russia from Poland. In the Mohammedan East it was referred to as the Frankish disease, which is to say one that was imported from Christian Europe. Some old French books call syphilis the Lombard disease and no doubt it radiated back from Lombardy into France after having been brought into Italy by Charles VIII's soldiers—by Charles himself, if we can believe several chroniclers of the time. In India and Japan syphilis was named the Portuguese disease; to those countries, to China, and other parts of the Far East it was brought by sailors from Portugal. The name now applied to this venereal disease in most cultured countries is taken from Fracastoro's hero. There are also other terms for it, for example one in German which may be translated "pleasure epidemic" or "venereal contagion."

The armies of the fifteenth and sixteenth

century were usually accompanied on their campaigns by hosts of prostitutes. These women certainly helped to introduce syphilis over a wide area in a brief period of time. Attempts were soon made to introduce some sort of sanitary control over them and over the harlots living in stationary brothels.

Even before 1500, warnings began to appear that young men should beware of prostitutes, from whom they would acquire a horrible disease. A celebrated German Latinist, early in the sixteenth century, said such women caused syphilis and leprosy. Some medical historians have supposed that in at least a few instances what was then and earlier called leprosy was really gonorrhea.

Many European physicians, during the early years of syphilis, refused to treat it. Perhaps their attitude owed something to that of the ancient Roman practitioners with regard to maladies of the genital organs. No doubt fear was partially responsible for it, too. Old women, barbers, and those who set themselves up as specialists in venereal disease took charge of the treatment. They bungled it, of course, but the regular physicians at first were no better. Syphilis and gonorrhea are still to a certain extent left to quacks (both licensed and unlicensed) because of the shame felt by some patients as well as because of the cost of long care at the hands of a skilled man. It would seem that these diseases might well be left, in the larger cities, to specialists, but many who represent themselves as such are unscrupulous, and most of the able men who deal with the

venereal diseases alone (or along with other skin maladies) give their services only to the rich and the poor. People who are neither paupers nor very wealthy usually find that it is a luxury beyond their reach to call upon the best physicians and surgeons.

Now, as in the sixteenth century, there are still lively debates over the need or needlessness of brothels and prostitution. The question of venereal diseases can hardly be kept out of the discussions. Soon after 1492 there was a strong renewal throughout Europe of the attempt to do away entirely with prostitution. This extended through the sixteenth century and part of the seventeenth. Later, the movement became more sporadic, although it has assumed new strength during the past forty or fifty years.

The religious movement which is commonly called the Reformation, the successful revolt of a large part of Christian Europe from the government and some of the dogmas of the Roman Catholic Church, was to a considerable extent of moral origin. I have elsewhere said that many of the things in the history of sexual morality that seem to be due to Protestantism were really caused by the syphilis epidemic. It is also worth considering to what extent the Protestant Revolution itself depended upon the fear of the new disease. About 1494, people were beginning to experience their great terror. Martin Luther (born in 1483) posted his famous ninety-five theses in 1517, and he was excommunicated in 1520. The Reformation was over by about 1570.

These dates seem to me significant. When Luther visited Rome in 1511, he found in that holy city the first generation of syphilitics. Pope Julius II, who sat upon the throne of St. Peter from 1503 to 1513, would not let the faithful kiss his toe (if we can trust the Memoirs of Paris de Grassine) because his foot showed marks of the French pox. Luther was later to put sufferers from syphilis in a class with thieves and murderers. He, as a monk with much liberty of motion, was not barred by any sort of force from intercourse with prostitutes and other loose women. No doubt his vows did mean much to him, although he was to repudiate them entirely, but the practice of his fellows suggested a simpler way of dealing with his strong sexual desires than revolting against the Catholic Church. In truth, he never planned a religious revolution until events forced him into one. But why did he finally dare to attack the celibacy of the clergy? From his own point of view, the choice seemed to lie between a "French whore" and a wife.

A French whore, in Martin Luther's way of talking, was a prostitute, usually a German one, who infected her lovers (her patrons, if you prefer) with syphilis. Any prostitute, any woman who offered bodily favors to a monkish professor, might be "French." Luther was to do his share of warning young men against the pitfalls of the brothel. The desire to avoid them himself probably helped to bring about the Protestant Revolution.

Not only Luther, but the other leaders and the great mass of followers in the revolt

against Rome, must have been influenced by the fact that a terribly virulent disease was sweeping across Europe, one which was beyond dispute connected with lax morals. Other factors, of an economic and a political nature, entered into the Reformation, and the moral issue did not depend exclusively on syphilis; but here, quite possibly, was the thing that turned the scale.

Moreover, Protestantism was shaped to some extent by the fear of venereal disease; the form it then took and has not entirely cast off concerns all of us who live in English-speaking countries. There was, too, a moral reshaping within the Roman Catholic Church, caused by the Protestant Revolution and the spread of syphilis. The hedonism of the Renaissance withdrew to small compass, breaking out as the Enlightenment of the eighteenth century when that disease was becoming less dangerous.

The Parlement of Paris ordered in 1497 that all persons suffering from the large pox should withdraw from social intercourse; those who lived outside the city were to leave it within twenty-four hours, Parisians were to withdraw to their homes and not to enter any public place until cured, and a hospital was provided for the poor. About at this time, several Italian cities were driving out their prostitutes. Others were providing hospitals for diseased men and women.

Under Luther's influence, a number of cities in Germany closed their brothels, especially between 1530 and 1550. John Calvin forbade

prostitution in Geneva, 1536. The Roman Catholic Church in the sixteenth century abandoned its medieval view that prostitution was a necessary evil, and brothels were shut in many German-speaking cities through the efforts of Jesuit preachers. (One of the duties of the Society of Jesus just then was proving that Roman Catholicism could be highly moral in times of syphilophobia.)

Charles IX in 1560 prohibited the keeping of brothels and houses of accommodation for prostitutes in Paris, ordering all bawds and harlots to leave the city within the usual twenty-four hours. His ordinance remained nominally in force until the eighteenth century, but, despite severe penalties, it was ordinarily ineffective. The municipal authorities of Paris were often willing to close their eyes to the existence of brothels, chiefly because secret prostitutes were always available and they could not be brought under any sort of sanitary control.

In more recent times, comparisons have been made between the prevalence of venereal disease in the women regularly registered as prostitutes by the police of large European cities and those who are paid for sexual intercourse although not so registered. Because a larger proportion of the former than of the latter suffer from syphilis and gonorrhea, it is argued that registration and regular medical inspection are at least worthless. The registered women, however, receive many more patrons than the unregistered ones per week, for which reason such comparison is not instructive.

But I will not here trace the history of sani-

tary control in prostitution, nor will I argue for or against the licensed brothel. Our age seems to be one in which semi-professionalism prevails in sport and sex: the amateur may be very well paid, often in indirect ways. It is probable that prostitution has declined during the early decades of the twentieth century, and some observers maintain that fornication and adultery of all sorts (including the noncommercial with the commercial) have become rarer. There can be no doubt that syphilis and gonorrhea have been growing less common, but this can by no means be considered a proof that extramarital sexual intercourse has been on the wane.

Voltaire tells us that practically all the soldiers of his day were syphilitic. The typical cheap prostitute of the eighteenth century we find described as noseless, but this was surely an exaggeration. Many nineteenth-century books on sexual problems assure us that the prostitute lived a very short life. The proof for such a statement usually amounted to no more than the fact that new faces were constantly appearing in the brothels. In modern Europe and America, many women have disappeared from their old haunts because they got married rather than because they died of a venereal disease.

Among eighteenth-century sufferers from syphilis are said to have been Louis XV and Mirabeau. This disease has played a part in the lives of many great and prominent men. At the end of the nineteenth century, Blaschko's investigations led him to the belief that one

out of four among the university students of Berlin suffered from some venereal disease. The figures for other classes of the population (except prostitutes) were less proportionately: about one workingman in eleven, one soldier in twenty-five. Gathering together large standing or fighting armies has caused great increases in illicit intercourse, but, in our time, the introduction of prophylactic methods on a large scale has much reduced the extent of disability among soldiers because of the venereal diseases.

Syphilis and gonorrhea are not now among the leading causes of death. It is true that physicians do not like to report that their respected patients have died of any venereal disease, and entirely trustworthy statistics are hard to find. In general, though, medical men who deal much with sexual maladies are not inclined to be pessimistic about them. The greatest bar to their eradication is the prudery that puts barriers in the way of information about sex. The idea that illicit intercourse ought to be dangerous still makes an appeal to some men and women.

MEDICAL RESEARCH

During the sixteenth and the seventeenth centuries, most physicians thought the venereal diseases to be at least two in number, considering syphilis a separate entity, but hardly understanding that soft chancre was distinct from it. A great physician of the eighteenth century, the Scotchman John Hunter, became

confused about venereal disease; his experiments and investigations led him to the belief that there is only one, and that gonorrhea should be considered a group of syphilitic symptoms.

The mistakes a great man makes, especially if his greatness is recognized, often prove misleading to many less able ones. Hunter's reputation retarded syphilis investigation to a large extent in the succeeding generations. Ricord succeeded, however, between 1830 and 1850, in demonstrating that syphilis is quite distinct from gonorrhea, the latter of which is chiefly a local disease. He first wrote of the three stages of the former, the primary, secondary, and tertiary. This classification is still used in medical works, although it now seems less important than it formerly did.

Wallace of Dublin introduced the use of iodides in treating syphilis in 1834. Mercury had been used in one form or another almost from the beginning. Virchow cleared up some mysteries about the disease, especially that of its reappearance after an apparent cure.

Noeggerath in 1872 discovered the latent gonorrhea of women, dangerous although hidden. Albert Neisser in 1879 isolated the gonococcus, the micro-organism responsible for gonorrhea, which could no longer be confused with syphilis. There was a tendency, as late as 1890, for even experienced physicians to consider gonorrhea a trifling disease; some of them spoke as though there were no venereal malady of importance except syphilis. In truth, although gonorrhea is less spectacular, it

presents dangers of its own, especially because the proper way to treat it remains a puzzle. The use of corrosive injections in the very earliest stage sometimes brings it to a quick close. Rest, massage, and careful diet, as well as heat treatments, are usually employed.

Ducrey and Unna, between 1889 and 1892, identified the bacillus of chancroid. Their discovery was chiefly important in separating the soft chancre from the hard chancre of syphilis, thus facilitating the control of the more serious disease.

In 1903, Elias Metschnikoff succeeded in transferring syphilis germs from a human being to a monkey. The fact that the disease could be inoculated in animals other than man greatly facilitated further research. Indeed, the very humane people who would forbid all experimentation on dogs and rabbits are in effect valuing these creatures above men and women. Perhaps they are right to do so, but we need not consider that aspect of the matter here.

I have said that Metschnikoff transferred syphilis germs, and this is true, but he did not know exactly what produced the disease. It was left to Schaudinn, in 1905, to point out the spirochaeta pallida, a vegetable bacterium shaped like a corkscrew, as the organism which causes syphilis. Further investigations confirmed the fact.

August von Wassermann worked out in 1906 and 1907 a blood-serum test for syphilis. The Wassermann reaction considered alone may sometimes be misleading, but it greatly helps a

physician in deciding whether a patient has really acquired syphilis or not, and whether the disease may be considered arrested or not.

In 1909 and 1910, Paul Ehrlich, working with a Japanese named Hata, produced an organic arsenic compound, dioxydiamidobenzol, better known as arsphenamine, salvarsan or "606." Iwan Bloch, Uhlenhuth, and others had previously suggested the use of arsenic preparations for syphilis. Salvarsan was immediately seized upon by the quacks as a remedy lending itself to commercial exploitation. Specialists offering a quick cure with "606" appeared conspicuously in the advertising columns of some newspapers. In 1912, Ehrlich's improved neosalvarsan or "914" followed, and a host of modifications under various names appeared in the next few years.

The arsenic preparations have not altogether displaced the mercury compounds and the iodides in the treatment of syphilis. They are especially useful with early cases, which they sometimes conquer in a short course of treatments, but they do not seem to represent the ultimate remedy of the disease.

Bismuth compounds have to some extent taken the place of the old mercury ones since 1920. Since 1919, the general paralysis of the insane, one of the most horrible manifestations of syphilis, has been treated by the injection of malarial blood or some other form of inoculation with malaria.

In 1911, the bacterium of syphilis was injected into various animals and the disease was reproduced in them. Thus Schaudinn's dis-

covery was further confirmed, and a road to new investigations opened. It was discovered by South American scientists in the course of the next decade that there is a disease in the llama, a beast of burden closely related to the camel but not greatly resembling it, produced by the same vegetable organism which causes syphilis in man. Furthermore, it was found possible to transmit this disease from human beings to llamas.

This discovery tends to corroborate the theory that syphilis is of American origin. It is possible that the microscopic organism caused a malady in the llama first of all, and that it spread from them to the American aborigines. Whether this is true or not, syphilis appeared as a new and terrible disease to Europeans after 1492. Its virulence has declined since because of the acquiring of racial immunity and the labors of research scientists and public health workers.

Great Britain in 1917 forbade unlicensed persons to treat the venereal diseases and stopped the advertising of patent medicines for them, at the same time establishing governmental facilities for the treatment of the poor. These measures more than cut new cases of syphilis in half between 1920 and 1924. We can be sanguine about the future.